MARCH • 1960

FIREMEN

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Warehouse Fire at Mitchel Air Force Base — *see page 7*

IONAL FIRE
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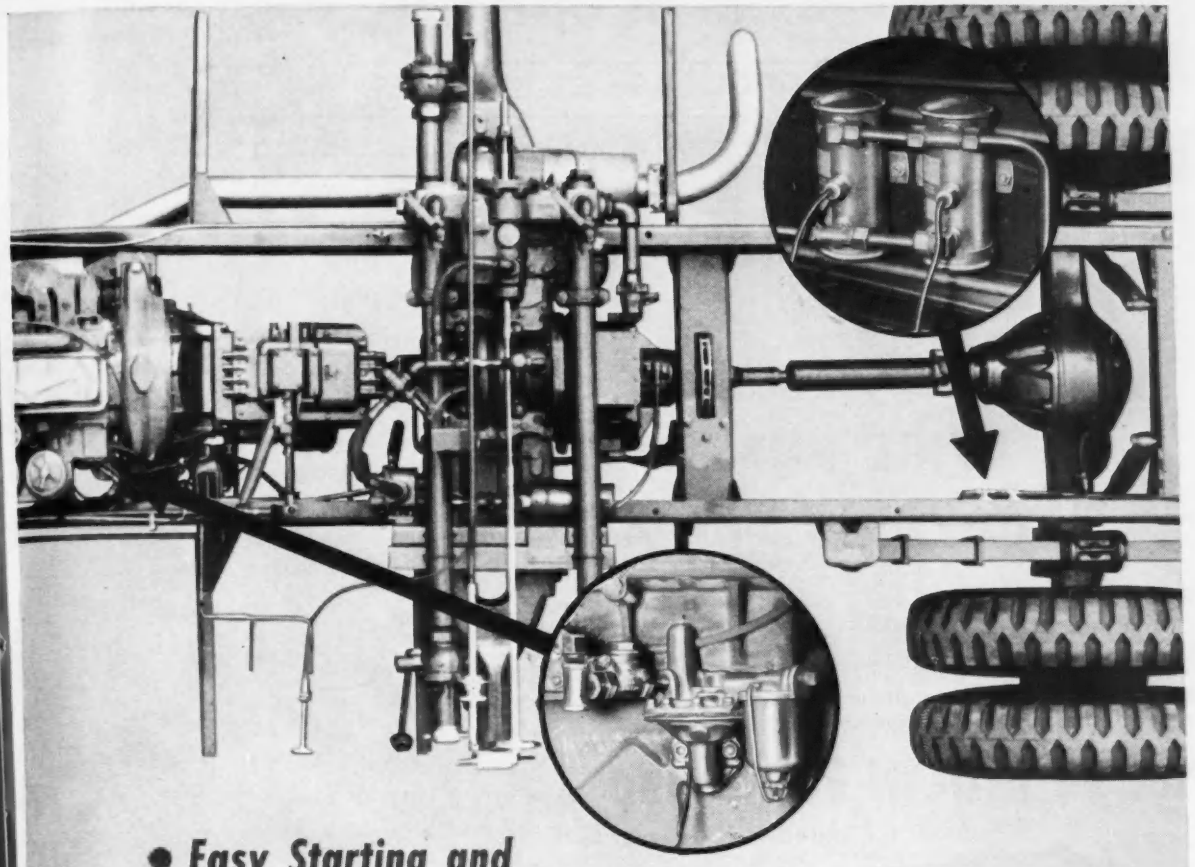

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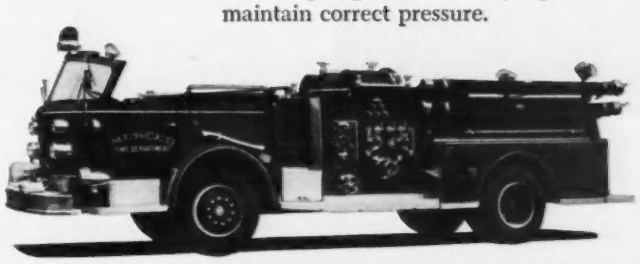

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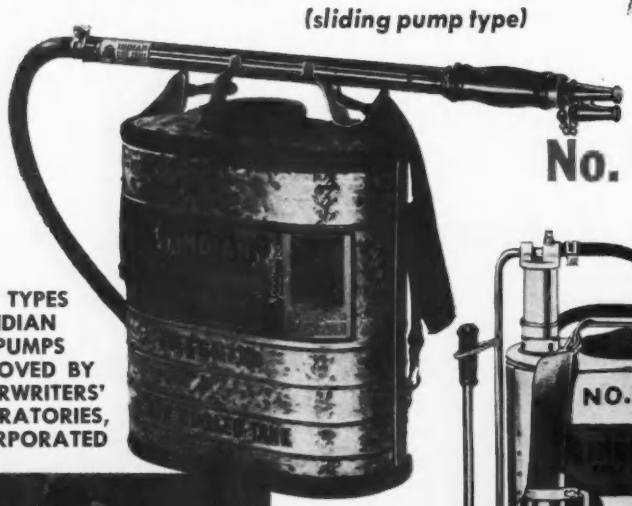

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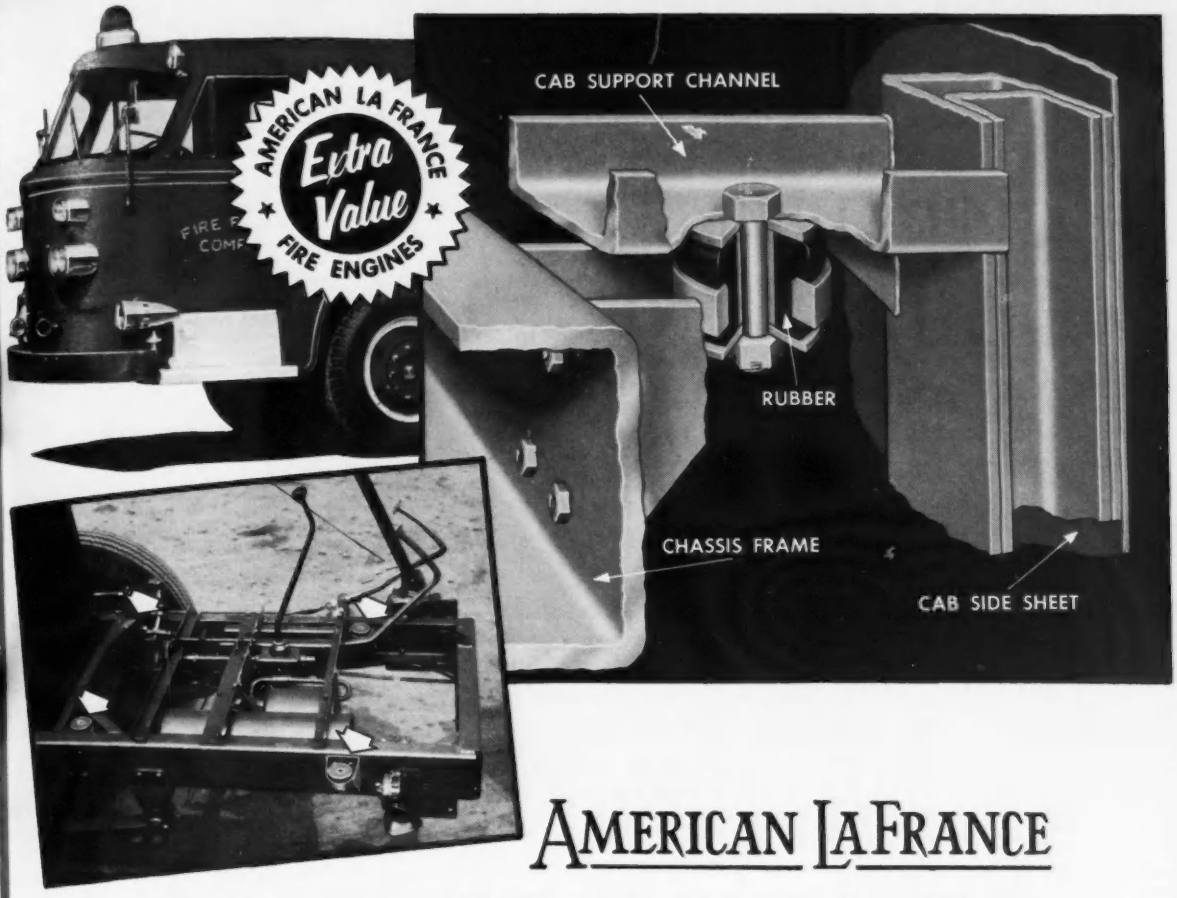

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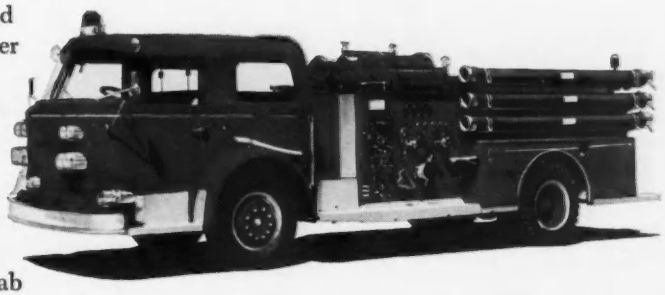

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NFPA FIREMEN

Volume 27 Number 3

A monthly magazine published for the fire service members of the National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts.

Ohio Cities, a magazine published by the Ohio Municipal League, reports that Governor Di Salle of that state vetoed a bill passed by the legislature which would have required a 56-hr. work week for all municipalities hiring three or more full time fire fighters. The magazine states: "The League's position relative to this bill was not a question of whether or not firemen should work 56 hours or more, but rather a question as to who should determine the work week of municipal employees. The League argued that this was a matter of local responsibility inasmuch as the funds necessary to effect a shorter work week must be raised at the local level."

This argument might appear to have some logic if there were not two sides to the coin and only one side is discussed. The cities and villages are creatures of the state. There are many state-wide laws directing municipalities in the area of fair practice and good municipal service. Minimum wage laws are common and are in the public interest. Educational standards are commonly set forth by law. The interest of the 56-hr. law is to protect a minority in the smaller cities and towns. Big city fire fighters and their friends and relatives form a large enough block of voters to be assured of a hearing. In small cities the fire department is often too small a group to obtain a fair hearing regarding their working conditions. True, the municipalities have the responsibility of raising funds but that is true of public schools and other required services.

The real nub of the matter seems to be that no effective standard for minimum public fire protection has been established for the small communities. Anything goes, whether it provides an effective level of protection or not. True, the underwriters make recommendations but the municipalities can take them or leave them or decide to have no public fire protection at all.

Perhaps one attack on the problem of fair hours and wages for the fire fighters in the small city is application of a minimum hourly wage comparable to other skilled workmen. If this were in effect where there are excessive hours of work the city would have to pay as much or more (if overtime rules were in force) as would be required to maintain a shorter work week. Suppose by way of example minimum pay was $100 a week based on a 56-hr. week. If a man worked 84 hours this would require $150 at straight time plus perhaps time-and-a-half for the excess 28 hours. Thus, if pay were on an hourly basis it would be cheaper for the city to hire sufficient men to provide a reasonable work week. The figures presented are merely examples of how the problem might be dealt with to assure fair minimum wages and hours of work.

This month's cover shows action at the Mitchel Air Force Base in New York when a 90- by 30-foot, two-story, stucco on wood frame warehouse was involved by fire. Response included four engine companies and two crash trucks commanded by Chief Milton M. Fischer, as well as mutual aid assistance from the Westbury and Uniondale Fire Departments. A similar structure separated by a four-foot alley from the warehouse was protected successfully by fire fighters.

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Spring Clean-Up campaign materials are now available from the NFPA Publications Department. Attractive items, such as the poster shown at right, include a new folder about the hazards of flammable liquid, Sparky materials for children, the home fire safety check list and the school inspection short check list. Also available is a Sparky clean-up TV film (16 mm. and 35 mm., sound, black and white, 60 seconds), a 20-second Sparky clean-up film (16 mm.) and a Sparky clean-up slide. A set of Sparky TV and radio announcements on clean-up accompanies each slide.

Warren Y. Kimball, Managing Editor; Paul R. Lyons, Editor; Henry S. Gere, Advertising Manager; Dianne Kofman, Editorial Assistant; Shirley Tobey, Fire Service Department; Virginia Stiles, Advertising Department.

Making a Good Job of It

by Warren Y. Kimball, Managing Editor, FIREMEN Magazine, and Manager, NFPA Fire Service Department.

TACTICAL DECISIONS ON THE FIRE GROUND

"The result has been a tendency on the part of many fire ground officers to rely on mere numbers of companies to surround a fire rather than to attempt effective tactical operations that would put out the fire with a minimum of loss.

". . . sometimes fires that could be handled efficiently by 5 or 6 well-manned engine companies may require a response of 15 or 20 poorly manned engine companies.

"In some areas, where major fires are infrequent, fire ground commanders may get comparatively little training or experience in tactical phases of fire ground command.

"Once a big line is in the wrong place and charged, it may take considerable manpower and time to get it correctly repositioned and the fire may not wait."

ONE of the prime responsibilities of the officer in command on the fire ground is the assignment of fire companies to positions to accomplish rescue, prevent extension of the fire and achieve prompt extinguishment.

This "tactical consideration" in fire fighting frequently determines whether the involved property will be saved with the resources at hand. In days gone by, many fire chiefs took great pride in these command decisions and a number were known as master fire ground tacticians.

In recent years, unfortunately, some fire departments have failed to stress the importance of the proper placement of fire companies. The result has been that, at some fires, the operation has principally been one of "following" the fire or committing companies without much regard for the over-all situation. In some situations there appears little pretense at carrying out a sound plan of operations; individual companies are permitted to get to work as best they can with little or no guidance from the fire ground commander.

A brief review of the history of fire department operations may shed some light on the problem. In the days of horse-drawn apparatus and inadequate communications it was recognized as imperative that each available unit be placed and used for maximum effectiveness. If this was not done a sweeping fire could be expected before additional help arrived. Each fire company given an assignment by a chief considered its assignment as crucial. Every detail was considered important including "setting" the pump to get the best possible water supply, making a hose layout good enough to cover the assigned position or area, using the proper size nozzle tips to get the maximum effective streams, and pumping at proper pressure for the layout.

When first alarm companies could not extinguish a fire they considered it a matter of honor and duty to attempt to hold their assigned position until reinforcements arrived. Help often came from out of town, possibly by railroad. The results generally were a credit to the fire service and a "good stop" was a matter of congratulation for all concerned.

One old chief recalled a big factory fire that happened when he was a junior officer. His company was assigned to stop the fire from passing a doorway in an interior wall. He had a small engine capable of supplying only a relatively small tip. How proud his crew was that they held the fire until a big engine arrived by flatcar from another city to put a powerful stream in service, thus making an effective stop.

Of course, manpower was, and continues to be, a major factor in successful fire fighting. For many years engine companies in busy districts were manned to be capable of handling two big lines with 1⅛-in. or 1¼-in. tips. Some companies with "first class" or "extra first class" engines even used larger nozzle tips on their big lines and made excellent stops on tough fires.

In recent years, while apparatus has improved in design, too many fire departments have such small manning that individual fire companies can only manage to get small streams into action until multiple alarm companies or off-duty personnel arrive. Frequently, several weak companies must be combined on the fire ground to get one good stream in service.

The result has been a tendency on the part of many fire ground officers to rely on mere numbers of companies to surround a fire rather than to attempt effective tactical operations that would put out the fire with a minimum of loss.

For example, sometimes fires that could be handled efficiently by 5 or 6 well-manned engine companies may require a response of 15 or 20 poorly manned engine companies. The difficulty of coordinating these weak units, the problem of assigning pumpers to hydrants or even providing access of the apparatus to the fire ground, frequently causes the operation to degenerate to the point where it is little more than a disorganized array of equipment. Accordingly, a fire which could have been extinguished by proper tactical operations is practically allowed to burn out.

In some areas, where major fires are infrequent, fire ground commanders may get comparatively little training or experience in tactical phases of fire ground command. They may not know how to assign fire companies effectively to carry out a coordinated plan of attack. All too often lines are merely placed to play on the flames with no attempt to cut the fire off from areas not already involved. Carelessness in the placement of companies seems to have increased in some areas where reliance has been placed on the effect of small spray nozzles or an "indirect application" through a window. These things have their place and may be effective if the lines are intelligently positioned in accordance with the over-all situation, but as one chief observed, "All too often the fires do not surrender when surrounded. You have to go after it." A line put in the wrong place may drive the fire through the building and greatly increase the damage.

All too often there is not even a central point of command and the duties and responsibilities of various assistant chiefs on the fire ground are not made clear, so that chief officers are moving from unit to unit, often countermanding orders previously given. The result may be that too much of the fire attack strength is concentrated in one position while some other critical point is poorly covered with hose streams.

We recall one fire in a two-story wood frame building covering approximately two city blocks. The first four engine companies with truck company support worked up the stairways and corridors from east and west and checked the fire which was at the front of the building. However, the chief in charge, a political appointee without fire fighting experience, failed to cover the extension of the fire to the south, so that companies at the front were outflanked by the fire which spread through the block and nearly trapped a number of men. An experienced battalion chief who commented on the importance of covering the rear of the fire was promptly "transferred to the sticks" where his advice would not be available in the future. This case, admittedly, is a bit unusual but is an example of the importance of assigning companies to proper tactical positions.

In another instance, a chief and assistant chief had a violent argument at a large fire. The chief who was known as a publicity seeker concentrated most of his force at the front of the building where it would make a good showing in news pictures and the assistant in charge of the rear of the building had so little help that the fire spread out of control, resulting in a needless, large fire loss.

In some departments it is almost noteworthy that if Chief A is on duty the companies will be placed efficiently and the fire will be knocked down quickly even before additional companies can arrive, but if Chief B is on duty the blaze develops into a real multiple alarm. In a battalion in a certain city, for example, one platoon experienced 20 multiple alarm fires that got away from the first alarm companies during a period when the other platoon only had four multiple alarms, all of which were quickly brought under control. Such a disparity is hardly accidental. The battalion chief who had the good record was constantly discussing and studying tactical problems with the company officers of his platoon and they knew exactly what his plans were likely to be and how to cover their assigned positions.

One story that has gone the rounds at chiefs' conventions concerns a deputy chief who knew that one of his battalion chiefs, while very zealous and studious, was very excitable and undependable on the fire ground. One night the deputy told his driver, "Chief X is working and it's a bad night. If there is a fire in that district let's get down there as quickly as we can." Sure enough, sometime before midnight a box rang in and the first company reported a "working fire." All the way down the avenue the deputy chief kept saying, "I bet he forgets to cover the rear" or "We'll be lucky if he's got the building laddered and opened up." However, when they pulled up, the deputy was really surprised. Lines were laid front and rear and ladders were up. There was only one thing wrong. The battalion chief had not located the fire properly and had gone to work on the wrong building.

In another city a deputy rolled on a multiple alarm for a block of brick-joisted buildings. On arrival, he saw immediately that he had an exposure problem and ordered a chief to take charge at the rear and cut off the fire. As soon as he had companies placed in front he thought he had better take a quick look at the rear and when he got around to the alley, he found to his dismay that no lines were working where needed because companies assigned to that area had been ordered into the wrong building.

These incidents may seem far-fetched but they are all actual cases. Under conditions of heavy smoke, particularly at night, it is often important to make certain just where entry should be made before a company is committed. Once a big line is in the wrong place and charged, it may take considerable manpower and time to get it correctly repositioned and the fire may not wait.

Many other incidents might be cited to show the importance of proper placement of companies. This is a subject of importance to every company officer as well as chief officer, because the placement of the first line may be the difference between holding a fire or having it get away. If the first line is not placed effectively, it may be too late to remedy the situation by the time additional companies arrive.

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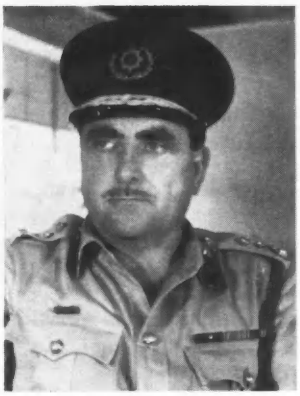
A REPORT FROM THE

TRINIDAD AND TOBAGO FIRE AND AMBULANCE SERVICE



Chief E. L. Hanlon

Trinidad, popularly referred to as the Land of the Humming Bird, is the most southerly of the West Indian islands, almost touching the eastern tip of Venezuela. Tobago, a smaller island to the northeast, is under the same administration as Trinidad from which it is separated by 22 miles of azure sea.

Trinidad boasts a cosmopolitan population of nearly one million in an area of 1,850 square miles, with extremely good relations existing between the different races and nationalities. Its importance in the West Indies has always been high, because of its riches in oil and agriculture, but this has been enhanced recently because Trinidad now includes the capital of the newly created Federation of the West Indies.

Port of Spain, the capital, has a population of approximately 120,000 and is an important port for ships of all nations and for ships plying between North and South America.

Trinidad's airport, of international standard, is in Piarco, twelve miles east of Port of Spain, and serves all major airlines operating between North and South America and Europe.

Trinidad boasts one of the finest and largest Fire Services in the overseas territories.

In recent years there has been a building boom in commercial and dwelling structures. While all modern buildings are of reinforced concrete and hollow clay blocks, there have been a number of renovations of the ancient timber structures, chiefly of a "face lifting" nature, resulting in modern facades hiding the same fire hazards of the old days.

— Chief E. L. Hanlon

THE Trinidad and Tobago Fire and Ambulance Service is responsible for all fire protection in these islands. This department's motto, "In the Service of the People," exemplifies the spirit of its members.

The strength of the service is just under 500 professional fire fighters (officers and men) with an additional 200 volunteers. As more fire stations are erected in the fast-growing communities, so the manpower figure grows. At present there are fourteen stations with forty-five fire appliances, twelve in the largest station.

In addition, Piarco Airport Fire Station, also manned by the department, houses five crash trucks and a rescue tender and conforms in all respects with ICAO (International Civil Aviation Organization) standards.

The department also operates seventeen radio-equipped ambulances placed at strategic points in fire stations throughout the territory. These ambulances are busy; in a recent six-month period they responded to 9,863 calls.

Head of the Trinidad and Tobago Fire Service is Chief Fire Officer E. L. Hanlon, a native of Manchester, England, and a graduate of the Institution of Fire Engineers. He served many years in English fire brigades before coming to the West Indies. Chief Hanlon has earned for himself the title of "Mr. Fire Prevention" as his department's policy emphasizes prevention of fires as well as putting out fires. In a remarkably short while, through an intensive educa-

Clebert Grayson
Officer in charge
Northern Division

Percy Allan Cox
Officer in charge
Central Division

Russel St. Clair Mottley
Senior Fire Prevention Officer

James H. Garcia
Staff Officer

tional campaign, he has managed to impress both the commercial world and the general public with the dangers of fire to their lives and economy and the need for rational safety measures. In the latest NFPA Fire Prevention Contest, Trinidad won a special recognition award.

Water Supplies

No fire department will ever admit to having enough water, but in Trinidad, due to the rapid extension in the building program, the shortage of water has become increasingly important.

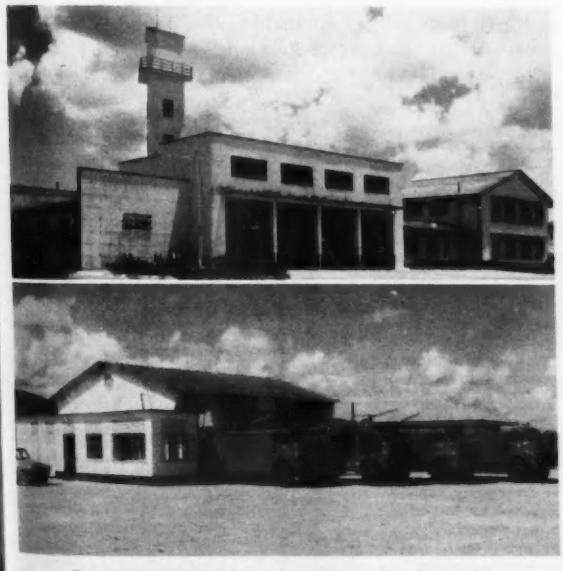
To counteract this deficiency, the Government has laid down a separate mains system in the commercial section of the city and three pumping units, one electrical and two gasoline-powered, are used for pumping water direct from the sea into these mains. The mains are normally kept full by means of non-return valves near to the pumps.

A touch on a switch at the Control Room at Headquarters starts the electric pump by remote control a half mile away, and immediately three thousand gallons per minute are available for the one hundred pedestal hydrants on this circuit. Within three minutes the other pumps have been started by men especially detailed for the job, and an additional two thousand gallons per minute of sea water are added.

The supply of fresh water from hydrants (painted a distinctive color) in the city depends on many factors, but at the height of the dry season, can hardly be relied upon for any large fire. Supplemented by the sea water supply, however, a substantial amount can be obtained.

The Government is making serious attempts to provide a suitable fresh water supply solely for fire fighting and the next few years should see a substantial improvement in this connection.

The fire service is making sure that all mains laid to supply new or growing communities have hydrants at strategic points for improved fire protection.



Top photo: Divisional headquarters at San Fernando.
Bottom: Airport fire station with crash tenders shown in front.

Shown above are two typical district fire stations complete with men's dormitories.

Residential districts are springing up around the city in the hilly areas, where the water supply is sufficient only for domestic purposes. Since these areas are surrounded by waste land, covered with vegetation which becomes tinder dry in the dry season, a serious threat is posed by "bush" fires, which spread with alarming rapidity. The sole means of bringing water to these areas is by fire apparatus fitted with tanks. By mutual agreement with many residents of these areas who have large, static water tanks on their premises, fire service couplings have been fitted to most of the tanks. In the event of fire, fire appliances will be able to work directly from the tanks.

Fire Apparatus

The department is equipped with the most up-to-date apparatus built in Great Britain. These units are built to a basic specification but many special features have been added for best results in local operation.

All units (except a few specialized ones) have a tank capacity ranging from 200 to 600 Imperial gallons, averaging on the whole, slightly more than 400 Imperial gallons per unit. These tanks are connected directly to the pumps, which are all turbine type with delivery ranging between five hundred Imperial gpm to one thousand Imperial gpm.

All pumps, hose and hydrants are fitted with an instantaneous-type coupling which is a great timesaver. One click and the connection is made and the coupling can rotate without disconnecting, making it easy to remove kinks in lines of hose.

Perhaps of special interest among the department's apparatus are the turntable ladders (aerial ladders), the hose laying appliances, emergency tenders, fire prevention patrol appliance, and crash tenders at the airport.

The turntable ladders are complete units with the ladder mechanism being an integral part. This appliance has remarkable acceleration, a turning circle of less than sixty feet and is fitted with a large capacity pump. The ladder mechanism can rotate through

This mechanical turntable ladder is built of steel tubing and extends to 100 feet. A monitor nozzle at the head of the ladder can deliver 325 Imperial gpm and is fed by a 650 gpm pump.

This pump-escape unit carries a wheeled escape ladder mounted at the rear. The unit also has a large capacity pump and a first-aid tank.

a complete circle and extends to one hundred feet. A large monitor nozzle is fitted on the head of the ladder to permit its use as a water tower. Communication is maintained between the man on the top of the ladder and the operator by means of a telephone system. The ladders are safeguarded against overloading, or over-extending at unsafe angles, and are automatic.

The hose laying units are custom built to the department's specification and carry six thousand feet of 3½-in. hose coupled in compartments. This hose can be laid in twin lines on ordinary roads at speeds up to thirty miles per hour. A telephone line is run out at the same time. Each of these units has a large capacity pump for water relaying.

These appliances have proved of great worth in making adequate water supplies available in a short time. Two monitors, fitted on the roofs, can pour large volumes of water (four hundred Imperial gpm from each monitor).

(Left) Emergency vehicle attached to Port of Spain headquarters includes such equipment as portable generator, floodlights, breathing apparatus, etc.

The emergency tender carries special equipment for rescue and life saving work, such as the oxy-acetylene cutting plant, hydraulic rescue equipment, hoists, resuscitation equipment and the like. It is manned by a specially trained crew and is kept continuously at work on all sorts of rescue operations.

The Fire Prevention patrol appliance is small, similar in chassis design to a jeep, and is fitted with a 250 Imperial gpm pump and two-way radio. This unit patrols the city "around the clock" looking for hazards which may lead to an outbreak of fire and orders their removal. If, through chance, an outbreak of fire does take place on its rounds, the crew can start fire fighting operations right away while calling on the radio for reinforcements.

There are also wheeled escape ladders which extend to fifty feet and are used primarily for life saving. These are fitted with large wheels and are carried on some of the fire apparatus on special mountings. Although weighing about one thousand pounds, they can be placed on the apparatus or removed by one man.

A specially trained crew wheels the escape ladder to a building and it is extended all in a matter of seconds, thus affording means of entry into buildings which are too high for the normal extension ladders.

Manpower

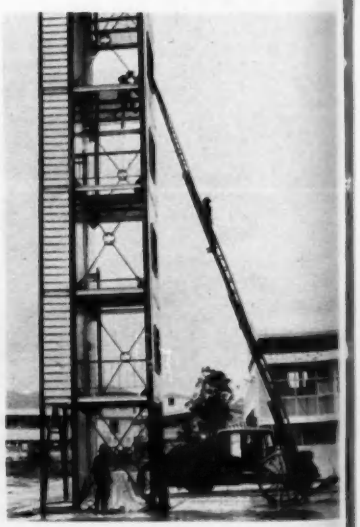
The professional section of the Trinidad and Tobago Fire Service includes more than four hundred men, from all walks of life, but with the common interest of fire fighting. They are backed by a volunteer section trained to the same exacting standard. Often, members of the volunteer service, by virtue of their training, are selected to fill posts in the professional service, and new recruits for the volunteers are always forthcoming.

The popularity of the fire service as a career is perhaps most easily illustrated by the fact that there are often as many as one thousand applications on the waiting list.

Training

The Trinidad Fire Service is modeled on a semi-military basis and, as such, discipline is one of the main facets of the training of firemen. Every aspect of fire

(Right) A wheeled escape ladder is in position against the drill tower. One man has entered the tower with hose while another stands by on ladder.



A class of junior officers receive training in hydraulics in the training school.

fighting has to be covered by every member and the department runs the largest and best organized training school in the West Indies which functions throughout the year.

The Training School features two lecture rooms, provided with film projectors, cutaway pumps and hydrants and each kind of equipment used in the service. Special two-week courses are run in pump operation, breathing apparatus and first aid throughout the year for groups of firemen and junior officers. The eventual aim is to have every member of the service pass through the Training School at least once every year. The other islands of the Federation of the West Indies send members of their fire service to Trinidad, especially for instructor training.

Every aspect of fire fighting is covered, every form of appliance and equipment is studied. The school has a special section nicknamed "Calamity Corner" graphically illustrating all sorts of causes of fires.

Every day drills are carried on at all the fire stations to keep men fit and well-trained in handling the equipment. Every new item of equipment introduced into the service is given a practical demonstration to all, but the main accent of the training has been concentrated on fire prevention. This has necessitated a revamping of the training program, but results are already showing that the efforts have been worthwhile.

A 100-foot turntable ladder is extended above the drill tower. Water is being pumped from a hydrant to the monitor nozzle at top of ladder.

In the downtown areas of Port of Spain and the second largest city, San Fernando, there are many high risks as can be expected in these older type cities with the colonial and Spanish type construction prevailing. Tactical drills on particular buildings are carried out several days every week, so that if fire should occur in any of these buildings, the department will be familiar with the approach, water supplies, points of entry and the attendant hazards.

Even the public is invited to the Training School to see films and demonstrations, to inspect the "Calamity Corner" and other sections of interest. The contact maintained continuously by the Fire Prevention Section of the department is utilized to teach the public how to avoid fire and how to deal with fire situations in the early stages. Results have shown that the public welcomes the opportunity to acquire this vital education.

Maintenance of Equipment

Since fire apparatus and equipment are usually of a specialized nature, and are expensive to purchase and to replace, the department maintains its own engineering workshops, manned by trained personnel, well-equipped with tools. Every maintenance job can be carried out here, and within the past few years two

(*Continued on page 26*)

Static water tanks such as one pictured have been built to assure a readily available water supply in key locations.

Rear view of hose laying machine. Pump will lay over one mile of 3½-in. hose already coupled in two lines at a speed of up to 30 mph.

Who Administers the Fire Department?

A survey of the "chain of command" in fire department administration.

AMONG the most important personnel in municipal government are those who administer the fire department. A fundamental reason for their importance is that, in cities of 25,000 population or more, the fire department's annual budget ranges from perhaps a quarter of a million dollars up to more than one hundred million dollars in the larger cities. Percentagewise, this reflects a significant part of the total municipal budget and, accordingly, each municipality must select the best person and the most efficient method of administering the fire department within the appropriated budget.

The administration of a fire department might well be considered as two distinct tasks: one is the supervision of the "spending" of the fire department's annual funds according to the policy of the elected municipal government officials who reflect the wishes of the voting public; and the other is supervising the selection, training and operations of available fire department manpower and equipment so that the department will function as an efficient branch of municipal service by providing good fire prevention, fire control and fire extinguishment.

Because of these two distinct functions, many cities try to solve the problem by having two or more persons as the administrators of the fire department. As a consequence, in some cities one function of fire department administration is carried out by one or more civilians who presumably are trained in municipal administration and in the wise appropriation and dispersal of municipal funds. The other function of administration is carried out by the chief of the fire department. In some cities the chief handles both functions. From the point of view of men in the fire service the chief of department is the leader. However, it is obvious that the chief also has superiors, that is, a "chain of command" leading to the top municipal officials and through them to the public.

Let's review, for a moment, how the fire department fits into the administrative pattern of various cities in the United States. Most U. S. cities are administered by a mayor or city manager, and a council. In the majority of these cities the mayor or manager is the "strong administrator," with the council handling legislative matters, and in other cities, the city or common council has more direct control of the municipal administration, and the mayor serves as a "weak administrator."

Some cities have the commission form of government through which elected commissioners serve collectively as a legislative body and individually as administrators of the various municipal departments.

In most U. S. cities, the chief of the fire department is directly responsible for the administration of his department and reports to the top administrative official, that is, to the mayor, the city manager, or the commissioner. This "chain" of administration is direct and efficient. The fire chief has clear-cut administrative responsibility and there is immediate communication between him and the top administrator of the city's affairs.

There are cities, however, which complicate the administrative problem by having another individual or group between the fire chief and the top administrative official. For example, there may be an administrative assistant to the mayor, to whom the heads of the various municipal departments report. Sometimes this person is a director of public safety, or the equivalent, who is appointed or elected to office. In other cities there are boards of public safety and the fire chiefs report through them to the top administrator.

Other cities may have a board of fire commissioners or fire engineers, or an individual fire commissioner, usually appointed to office by the elected mayor, city manager, or the city's commissioners.

Usually, such a group, or individual, is responsible for some of the administration of the fire department. In a few cities their authority includes complete control of fire department appointments, promotions, discipline, and expenditures; in other cities, their responsibility merely entails basic supervision of expenditures and over-all fire department functions. Whatever the case, it is obvious that the administrative authority of the fire chief is weakened or diluted when he shares some of the responsibility for fire department matters with one or more persons.

In an attempt to study the situation on a national basis, the NFPA Fire Service Department made a survey of cities having 100,000 to more than a million population. The results of this survey disclose a mixed pattern of municipal administration.

Here, for example, are some of the facts that the survey disclosed: In five cities of over one million population, three have individual fire commissioners and two operate with boards of fire commissioners. In 12 cities of 500,000 to 1,000,000 population, two have individual fire commissioners, four have boards of fire commissioners, four have directors of public safety, one has a common council, one has a fire department committee of the city council with administrative powers and in two cities the mayor is the administrator above the chief of the fire department.

In 21 cities of 250,000 to 500,000 population, only one has a person who carries out the function of an individual fire commissioner. Ten others have directors of public safety, six have city managers, three have mayors as the head administrator and one has a board of public safety.

In the cities of 100,000 to 250,000 there are two individual fire commissioners, six boards of fire commissioners, seventeen directors of public safety, sixteen city managers, nine mayors, and fifteen others with miscellaneous forms of administration such as a board of fire engineers, a commissioner of public safety and welfare, a fire and police commissioner of the city council, a board of fire and police commissioners, and others.

In most cities, these persons are appointed to office

either by the mayor or by the city manager of the municipality. In one of the largest cities appointment is made by the managing director with the approval of the mayor. In other cities appointment is made by a board of directors and in two cities the director of public safety is elected by popular vote. Most of the appointments are made at the "pleasure" of the appointer and the terms generally range from one to four years or can be indefinite. As a general practice, the persons appointed to such office are likely to be removed when political control of the municipality changes hands.

As a matter of practical politics, however, these individuals are generally chosen for their administrative skill to carry out the policy of the elected municipal officials in spending or saving money. Frequently, these administrators may not have had previous experience with the fire service but are appointed to office specifically to bring new talent and a fresh approach to the administration of the fire department budget. To some extent, they need to be "briefed" on the operational requirements of the fire department and the standards of fire department service. In the course of time they should become somewhat familiar with the administration and operation of fire departments in other municipalities or perhaps on a national basis so that their own individual fire department can be given appropriate recognition for its accomplishments of municipal service.

Also of interest is the method by which the fire chief is chosen or appointed to lead his department. In most of the cities surveyed, some form of examination is utilized to select one or more individuals from whom the chief of department can be chosen. In some cities, however, the appointment is strictly on a political basis and a private in the ranks or perhaps even a civilian may be chosen as chief of department, despite the fact that the department may have senior fire officers with years of experience. In the majority of cities, a civil service examination is used with the mayor, city manager, or some other official appointing one of the top men who pass the examination.

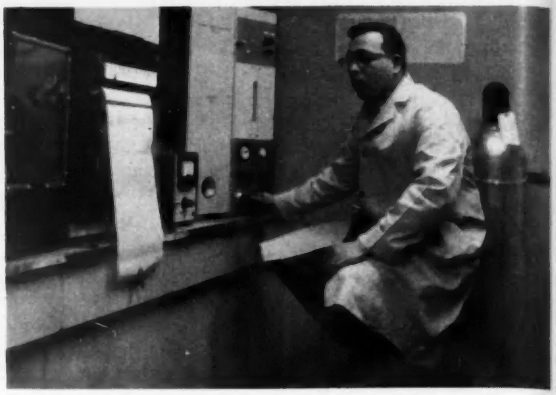
The requirements for qualifying for the examination for chief of department also differ in various cities. For example, in Canton, Ohio, the examination is given to three assistant chiefs and the mayor must appoint the man with the highest rank. In Detroit, the examination is open to chief officers under sixty. Passing grade in the examination is 65 per cent and it is based upon seniority and the results of a written examination. After this there is an oral interview with the board of fire commissioners before the chief is finally selected. In Worcester, Massachusetts, the examination for chief is open only to members who have been promoted through the ranks to the second chief officer's position or to the next lower rank (there must be at least four eligible officers) and these men take the civil service examination for chief of department. In Dayton, and Columbus, Ohio the examination is only

(*Continued on page 28*)

To Whom Does the Fire Chief Report?

Population	No. of Cities Surveyed	No. with Individual Fire Comm.	No. with Board of Fire Comms.	No. with Directors of Public Safety	No. with City Manager	No. with Mayor	Other	Comments
Over 1 million	5	3	2					In 4 cities these men are appointed by Mayor: in one city appointment is made by Managing Director with Mayor's approval.
500,000 to 1 million	12	1	4	4		2	1 (Exec. Comm. of City Council)	Board of Commissioners in Wash., D.C. appointed by President of U.S. Appointments in other cities in this group by Mayor or City Manager.
250,000 to 500,000	21			9	6	3	3*	*1 city has Board of Public Safety. 1 city has a Director of Fire. 1 city has a Manager of Safety and Excise.
100,000 to 250,000	65	2	6	17	16	9	15*	*Includes the following: 1 Board of Fire Engineers 2 Bureau of Police and Fire 2 Board of Public Works and Safety 1 Fire and Police Committee of City Council 2 Board of Fire and Police Comms.

Fogging with chemicals for smoke odor removal should be done before coverings are removed and with the least possible disturbance of articles to avoid exposure of uncontaminated surfaces.



Components of malodor in mercantile stock of garments can be separated and identified in this Vapor Phase Chromatograph in the Airkem laboratory. Once known, "opposites" to these elements can be determined and formulated to counteract the problem odor.

SMOKE ODOR CONTROL

Frequently, in salvage work, fire departments do their best to reduce or remove the persistent odor of smoke. In dwellings and other small buildings, some fire departments have done an excellent job, using portable sprayers and deodorants. When a large building is involved by fire, however, or when there is extensive damage by smoke, the fire chief must decide whether his men can do this work effectively with available equipment, or whether specialists in this field should be called.

The following article was submitted to FIREMEN magazine by Airkem, Inc., of New York City. It presents some interesting aspects of the smoke odor removal problem that should be considered by fire departments.

FIRE in the cafeteria of a large food manufacturing plant caused actual physical loss of $250,000. About a quarter million pounds of bread, cakes, biscuits and candies were affected by smoke, water and dampness. Some $40,000 worth of cartons were affected by smoke, and smoke odors made the plant temporarily unfit for normal operation.

Shortly after the fire, smoke odor removal specialists were called. Starting work the next morning, these men applied chemical fog and aeration for two days. Results: The food products, packaged and otherwise, were declared fit for human consumption and released for salvage; the cartons were ready for immediate use; the plant was completely free of smoke odor. The cost of the smoke odor service was slightly more than $1,000; the minimum saving was estimated at $40,000. The plant owners were relieved of anxiety and completely satisfied.

This case history illustrates several of the factors with which fire departments are concerned, directly or indirectly, on smoke odor problems. First, is the question of loss reduction and salvage. Second, the matter of re-occupation and use of premises, sometimes an even greater economic factor. Last, but far from least, is the public relations factor — satisfaction of the occupants. It is probably within the experience of every fire department that occupants have been so dismayed by smoke odors after a fire that full credit to the department for saving the basic structure has been denied.

This examination of the problem at the request of FIREMEN magazine must start necessarily with the source of smoke odors. Smoke odors are caused by tiny balls formed when volatiles condense on soot particles rising from the burning material. These minute balls contain mixtures of oils, tars, gums, water and soot. They have semi-liquid, gummy centers with harder, crusty surfaces. The exact composition will vary with fuel, temperature, degree of oxidation, and other factors.

Carried on normal air currents or driven by thermal drafts, these particles adhere to any exposed surface and penetrate cracks and crevices. Heat from fires often opens cracks permitting the smoke solids to enter; later cooling closes the cracks sealing in the odor source.

The popular concept of combating odors including smoke odors is to mask them by introducing a more pleasant smelling "deodorant" into the atmosphere.

Fire authorities will recognize the futility of this approach since the masking will persist only as long as the counter odor lingers. The source of the smoke odor remains.

If the smoke particles can be exposed to a sufficient volume of moving fresh air for a long enough period of time, they will be dissipated. The problem is that air currents cannot reach deeply imbedded particles and it takes so long to use only forced ventilation effectively, that this method is generally impractical and uneconomical.

To explore the modern methods of smoke odor removal, it is necessary to describe the techniques developed by Airkem, Inc. (headquarters office in New York City), a company specializing in odor control and removal, and the scientific research which contributed to the process.

Two basic phases are involved in smoke odor removal. The first was evolved by a Flemish scientist, Zwaardemaker. He observed that when two opposite odors are smelled together, the odor intensity is less than that of either odor smelled separately. This principle was established and extended by Guy Pascal, an American, and one of the founders of Airkem.

Further extensive research led to the use of 125 "odor opposite" components in the basic Airkem product, components which tend to cancel out the great majority of odors. In smoke odor work in particular, special formulations include components to combat certain odors created by fire problems.

In the second phase, the solution of "odor opposite" components when vaporized, settles and penetrates in the same manner as the smoke particles. The Airkem molecules tend to replace the odor balls. Surface-active agents in the solution loosen the smoke units releasing them to the air. The volatile oils, the prime odor source, are dispersed by the evaporation and displacement action.

Once these odor particles are airborne, fans and ejectors are employed to carry them out of the premises.

On occasion, there are other steps to be performed. Flooding or mustiness, oil or similar spillage, and heavy soot coatings may require scrubbing with a counteractant-detergent, sometimes including a disinfectant component, an operation usually performed by a cleaning service.

Not infrequently, there are odors resulting from fires which are not smoke odors. Examples are decomposed foodstuffs, blood and decomposed flesh, chemicals from ruptured pipes or containers. These may require the use of special formulations and techniques.

Normal procedure is to survey the property as soon as possible after a fire. Delays may intensify the odor problem and make the removal more costly in time and materials. From this study, the smoke odor specialist can determine the problems, the materials and methods to be employed, the salvage potential, the time required, and estimate costs. (Airkem Smoke Odor Service branches perform this service at no cost within reasonable travel distances.)

Ordinarily, only unsound structural materials or contents beyond salvage are removed prior to treatment. Exceptions have been made when the odors are so strong that workmen have refused to enter the premises. Contents that did not have to removed for fire fighting should not be disturbed. Moving them only exposes previously uncontaminated surfaces.

Dispersion of the counteractants is accomplished by dry-fogging with special vaporizers designed for the purpose, both hand-portable and stationary types. Skilled operators are required since maximum effectiveness calls for complete coverage of every contaminated surface and object with variations in the length of application according to the nature of the odoriferous material and the degree of contamination.

Depending on the degree and character of contamination, the layout of the building and nature of contents, the fogging and aerating process may have to be repeated two or three times but often one treatment is sufficient. Time required may range from an hour to a week. Smoke odor removal in the average dwelling requires three to four hours; the average mercantile establishment takes from eight to twenty-four hours, a hotel or hospital with general contamination of 100 or more rooms may require the maximum time.

An osmometer is used to determine the effectiveness of a counteractant against an odor component found in charred wood.

Occupants returning to a de-contaminated building may be apprehensive of lingering odors even though none remain. To give them assurance, a stationary control unit can be loaned until the occupants are satisfied there will be no further difficulty. At times, some odor may develop after initial treatment from deeply imbedded or otherwise hidden sources. This requires detection and treatment of the residue.

While some materials are more susceptible to smoke odor than others, the fuel, temperature, and other fire factors are apt to be more significant than the materials themselves. In Airkem's experience, the only materials from which smoke odors cannot be removed are unpackaged foodstuffs with high butterfat content and such exposed bulk items as flour, coffee and tea.

In most cases, the composition of products has little if any bearing on the smoke odor removal efficiency. Silks, woolens, cottons and synthetics, for example, can be treated with equal facility.

Even vegetables and raw beef have been deodorized with the approval of health departments. Structural materials including insulation can also be deodorized.

Clothing and decorative fabrics should be deodorized before dry cleaning. In many cases, smoke odor removal will make dry cleaning unnecessary. In any event, dry cleaning may "set" the odor and make removal much more difficult.

More often, it is the nature of the fuel and other fire factors including the duration and severity which affect the deodorization problem. When foam rubber seat cushions smolder for a long period in a closed car, the resulting resinous deposit is highly resistant to any known smoke odor removal material. Nevertheless, such smoke odors have been treated successfully.

Another question on limitations concerns size of the structure and extent of damage. Size in itself is no problem. The number of partitions or other factors involving ventilation may be more significant than size alone. A large warehouse can be treated with greater ease than an apparel store with several rooms broken by shelving, racks and display fixtures. Since the salvage potential is usually high in the latter case, a slightly higher cost ratio per cubic foot is unimportant.

Extent of damage is best illustrated by char. While the deodorization of char calls for the hardest physical work and best skills of the odor removal specialist, it has been accomplished many times when the char existed to a depth of several inches. In a gutted building, charred members and contents slated for removal can be removed before smoke odor treatment but this is not always possible or desirable.

An outstanding example of both size of structure and extent of damage is the Tuller Hotel fire in Detroit in 1959, that took three lives and did damage estimated at $500,000.

The flash fire gutted the lobby and parts of the second floor. Smoke went through elevator shafts and stair wells to every room in the twelve-story hotel. Elevators were still operative but every ascent pumped more smoke odor to the upper floors.

While the lobby and its furnishings required complete rebuilding and refurbishing, the semi-residential hotel had the problem of getting tenants back into their homes and eliminating the highly noxious odors.

An Airkem crew went to work immediately following a survey and in twenty-four hours guests and employees were commenting on the noticeable improvement. While the gutted lobby was the first point of attack, simultaneous service was performed in the rooms and halls and even to guests' belongings. Where admission to rooms was a problem, maids were given aerosols to place in rooms as temporary relief. Cleaning help was supplied with counteractant-detergents.

By the end of a week, the charred lobby was completely free of smoke odor as was the rest of the hotel and the relieved manager expressed his gratitude with the succinct comment:

"The Tuller hasn't smelled so good in years."

The only real limitation on smoke odor removal then is economic. There are cases where the smoke odor problem is too minor or the salvage potential too small to justify any expenditure.

Average costs for smoke odor removal run about as follows: Automobiles, $40 to $50; dwellings, $75 to $125; commercial buildings, $200 to $300. Many services are performed at both lower and higher figures in all categories. Costs are based on time, materials and expenses. It should be noted that on bigger, longer jobs, a big part of the time is devoted to aeration when the service crew does not remain on the premises.

In the final analysis, smoke odor removal is about as complex and technical as fire fighting itself. It has many variables calling for trained personnel and selectivity in materials and methods.

Airkem, Inc. was formed in 1941 and has specialized in odor control for the industrial and institutional market. In addition to chemical formulations, the firm has equipment and systems for the control of odors from industrial plants, commercial kitchens and other odor sources.

It has the largest laboratory in the world devoted solely to odor and odor control research — the science of osmology. Its staff of chemists, biologists, and chemical and mechanical engineers work constantly on fundamental research in this highly specialized science.

In addition to fundamental research, this laboratory performs much applied research for identifying odors and their sources and developing specific counteractants.

The development of smoke odor service began in 1948 when a small but smoky fire in the basement of a fabric importing firm in New York City contaminated hundreds of thousands of dollars worth of expensive fabrics in the showroom. The Airkem staff was asked to attempt to remove the smoke contamination. By a trial and error method, using blankets saturated in chemicals with fans blowing on them, squirt guns and other expedients, the experiment progressed. The work was successful, for sample bolts of fabric subsequently were tested and pronounced odorless.

Today, there are 200 Airkem service branches across the country giving twenty-four hour service on smoke and other emergency odor problems. Lists of the branches are available to fire departments. In addition, they are listed under Airkem in regular telephone directories and under "Deodorants" in classified directories.

The question has been raised as to whether fire departments should provide this service. If they are willing to invest in the training, personnel, equipment and materials, they can do so. However, in the fire department's budget the entire cost would be charged to smoke odor removal only, whereas the commercial firm that provides this service deals with a wide variety of odor control problems and can pro-rate the cost of smoke odor removal. The result is that the cost of smoke odor service in a community is considerably less through this commercial operation than it might be through a fire department.

While smoke odor removal is largely a matter of experimentation at the site and long hours of hard, thorough work, the improper or careless use of materials or the wrong methods can do more harm than good. Airkem smoke odor chemicals are non-toxic, non-corrosive and stainless when used properly, but they are not necessarily effective in the hands of an amateur. Major jobs often call for crews of eight to ten skilled operators under the supervision of a technical specialist. It is not a service that can be delegated on a part time basis to one or two firemen. Neither is it a field in which all firemen can be made expert.

Fire departments frequently are called upon to get cats out of trees and small boys out of crevices, and they get calls occasionally to remove skunks, dead animals, ammonia leaks, oil spillages and many other odor sources. It may save the department time and effort if a specialist can be called for such emergencies.

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See New Akron Brass Catalog 60—Page 6

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500 GPM - 1000 GPM - 2500 GPM

SPECIFICATIONS

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1145	500	417	2½"	6⅞"	5¼ lbs.
1147	1000	833	2½"	7¾"	7¾ lbs.
1148	2500	2083	Optional	9¾"	11¾ lbs.

CONSTANT GALLONAGE—INCREASED REACH
Delivers its full capacity, 500 — 1000 — 2500 GPM, in all streams. Greater volume of full capacity streams results in fog and straight streams of far greater reach and density.

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ORGANIZING FOR FIRE PREVENTION

A report of how one city tackled the big problem of year-round fire prevention.

IN 1958, two retired fire fighters, Michael V. Mansfield and Laurence A. Huntoon and Victor J. Mari, Executive Director of the Safety Council of Western Massachusetts, reactivated the Springfield City Council Fire Department Committee. Up to this time the committee was just a group of five legislators, with only one of them active on the city's Board of Fire Commissioners. After conferring with Alderman Arthur J. McKenna and Councilman Paul E. Affleck, it was decided that this committee should be comprised of legislators and technical advisors who would cultivate areas of fire prevention not normally covered by the Board of Fire Commissioners or the Fire Department. This committee has shown what can result from citizen participation.

Organizations cannot be formed properly nor can they work effectively unless the framework of other organizations have been carefully examined. Accordingly, the committee sent questionnaires throughout the United States to sixty-five various committees in cities actively engaged in fire prevention work. One fact was brought out by the survey: Springfield is the only city among those surveyed where the fire prevention organization includes legislative membership and thus gets basic legislative support.

One of the committee's first acts, with the aid of State Senator Maurice A. Donahue, was to obtain passage of a bill requiring employees of nursing and convalescent homes to stage regular fire drills.

On April 28, 1958, the committee voted to extend its membership to fifteen citizen advisors, plus its present legislative group of two aldermen and three common council members. The citizen advisors would be chosen according to their knowledge and interest in fire prevention.

During the following month an ordinance banning the sale and storage of portable space heaters was passed in the Springfield legislature, to be effective in 1960. Copies of the ordinance, printed in English, Spanish, French and Italian were distributed to dwellings by the Springfield Gas Light Company.

At the request of Councilman Paul Affleck, John March, a registered professional engineer, presented a talk to the group on the need of automatic sprinklers in the public schools in Springfield. The committee as a body voted to name March chairman of the automatic sprinkler sub-committee and to make a complete fire prevention engineering inspection of fourteen public schools. With the aid of Chief Edward Boyle of the Springfield Fire Department, Laurence Huntoon and Michael Mansfield, the inspection team graded nine schools poor, three fair and two good, from a fire prevention standpoint. Open stairways, large undivided areas, poor wiring arrangements, arrangement of ductwork, paint spraying and metalworking hazards were some of the deficiencies noted. After hearing the report, the committee voted to request automatic sprinklers for all of the public schools.

Our Christmas holiday fire prevention program was quite effective when we published 17,000 cards containing information on how to avoid Christmas tree fires. These were sent home with public and parochial school children throughout the city. Springfield-Monarch Insurance Company paid for the printing and cost of these cards.

The year 1959 began with a determined effort by this committee to continue the campaign against fire and we were now looking for new means to finance our program. Springfield's Mayor Thomas J. O'Connor gave his approval for a $100,000 expenditure to finance the installation of automatic sprinklers. On June 9, 1959, this amount was unanimously approved by the city council. The sprinkler specifications were drawn up by John March and unanimously approved by the body.

As a result of the tragic loss of life in Springfield due to the use of portable space heaters, the committee decided to amend a space heater ordinance of 1958 and to make it effective June 1, 1959. Victor Mari, Chief Boyle and John March changed the wording of the ordinance to include the use of salamanders and to clarify the definition of a portable space heater. The ordinance was revised, amended and accepted by the committee, enacted by the Springfield legislature, and became a city regulation June 1, 1959.

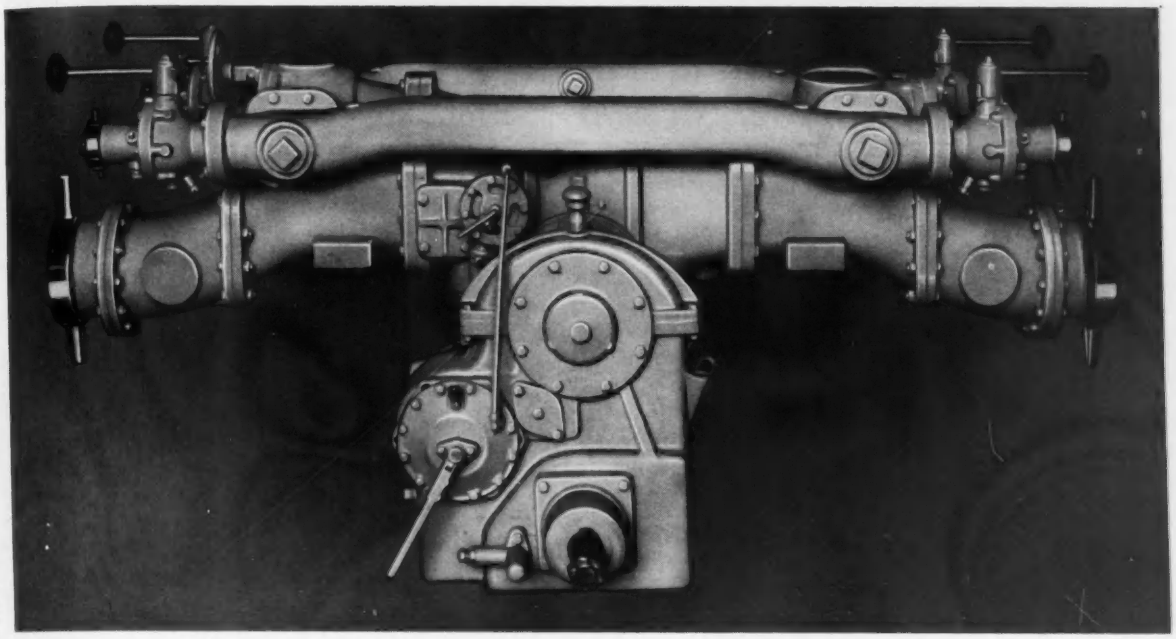
One of our most successful accomplishments was the Spring Clean-Up Drive. Chairman was Douglas Spingler, who merged the Safety Council of Western Massachusetts, the Fire Department, the Department

(*Continued on page 22*)

Members of the Springfield Fire Prevention Committee are, first row: (Left to right) Councilman Frank Lagone, Alderman Arthur McKenna, Councilman Paul Affleck; second row (standing), Walter Clune, fire commissioner, Longmeadow; Mike Mansfield, industrial consultant; Capt. A. DeSanti, chief fire inspector, Springfield Fire Department; Fred Marquis, New England Fire Insurance Rating Bureau; Laurence Huntoon, retired chief fire inspector; back row, Eugene Wessells, Jr., Western Mass. Electric Company; Dr. Milton Kobroski; Victor J. Mari, director, Western Mass. Safety Council; John L. March, fire protection engineer; Charles Freeman, Springfield Monarch Insurance Company; Walter Greany, lawyer; Paul Knight, formerly of New England Fire Insurance Rating Bureau.

THE INSIDE STORY

Why It PAYS to Specify HALE



In December we told you about the HALE Hi-Stage QSM *single impeller double suction* pump, an "in-fighter" with tremendous slugging ability. HALE Hi-Stage gives you 1000—1250—1500 G.P.M. *with lots of reserve.*

Above is the HALE Type Q pump — two stage — *double impeller.* This is the pump you need for big jobs . . . maximum working pressure to 600 p.s.i. You can use it for 1000—1250—1500 G.P.M. *and have lots of reserve.*

If you need only 500–750 G.P.M., you wouldn't use either of the above high capacity pumps any more than you would use a 10-ton truck to bring home the groceries.

HALE recognizes this, *so builds four basic pumps,* two single-stage and two two-stage pumps — *not just one stretched to meet all conditions.*

Watch these pages for more about the "basic 4" and the inside story of why It Pays to Specify HALE.

Write Today For New Bulletin No. 367 . . . . . .

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PENNSYLVANIA

Organizing For Fire Prevention

(*Continued from page 20*)

of Streets and Engineering and the Public Health Department into one crew to clean up homes, backyards, alleys and every littered nook and corner in the City of Springfield. The drive was conducted during the week of May 4 to 9, 1959, then extended for two extra days. Over forty trucks and approximately 200 men worked day and night to pick up the rubbish. At the same time, Alderman Arthur McKenna and Laurence Huntoon led a group of our committeemen through the north end of Springfield. A door-to-door canvass was made to inform the residents of the June 1st deadline prohibiting the use of portable space heaters and in some cases these heaters were removed from the premises. Approximately 1,000 portable space heaters were in use in the city and nearly 700 were picked up during our Clean-Up Week campaign.

Immediately following our Clean-Up Drive, the fire department conducted in-service inspections of every dwelling in Springfield. The inspection program, which lasted through the fall and included approximately 30,000 buildings, was headed by Chief Edward Boyle. From now on it will be conducted annually.

In March, 1958, Michael Mansfield invited all Western Massachusetts fire chiefs, Otis M. Whitney, then commissioner of Public Safety, and staff members of the Department of Public Safety to meet with our committee to discuss setting up a Technical Fire College in Massachusetts. Over seventy representatives of Western Massachusetts fire departments attended the meeting. All were in accord with establishing such a college, to provide courses for key personnel interested in the field of fire prevention and/or protection. Short courses, as well as complete curricula, have been planned.

The culmination of 1958 activities centered around a Dutch-Treat banquet held in March of 1959. On this occasion, the following five members of the committee were honored for their efforts in launching the committee on several campaigns and were awarded plaques: Charles E. Freeman, Secretary of the Springfield-Monarch Insurance Company, for his Christmas Tree safety sub-committee. (There was only one fire attributed to a Christmas tree during the Christmas holidays); John L. March, Fire Prevention Engineer, Liberty Mutual Insurance Company, for his work as chairman of the sub-committee on automatic sprinklers; Paul R. Knight, Resident Secretary of the YMCA, for his chairmanship of the Fire Prevention Week program and parade; retired Chief Fire Inspector Laurence Huntoon, for his groups' program to outlaw portable space heaters; retired Fire Fighter Michael V. Mansfield, for his work as chairman of the technical fire college sub-committee. During the banquet, Warren Y. Kimball, managing editor of NFPA FIREMEN magazine spoke on modern programs for fire prevention, training fire fighters, department facilities and equipment, and staff work and organization, and was warmly received by the group.

The Springfield City Council Fire Department Committee is now composed of top men in the engineering, medical and legal professions, civil defense, state agencies and professional business fields.

The fall of 1959 brought two of our most satisfying ventures, the Baby Sitting Course and the Fire Prevention Week program and parade. In conjunction with the Safety Council of Western Massachusetts, our committee conducted a two-evening program designed for baby sitters, with approximately 100 persons attending each night.

After six months of planning, the committee's second annual Fire Prevention Week parade was finally held in October, 1959. More than 2,500 participants marched to bring the message of fire prevention to Springfield and neighboring communities. The oldest piece of apparatus in the parade was an 1859 steam pumper, drawn by two 1,800 pound prize horses. More than 400 Shriners marched in the parade, and seventy-six units from forty-four communities also participated. The two-hour parade was followed by a firemen's muster. We all felt that the parade was a tremendous success and forcibly brought across the message of fire prevention to the thousands of watchers. Window displays, fire department visits to public and parochial schools, and visits by school children to fire stations throughout the city were also included in Fire Prevention Week.

The committee owes its thanks to the local newspapers: the *Springfield Union*, the *Springfield Daily News*, and the *Sunday Republican* for outstanding coverage of committee activities, and to stations WWLP and WHYN for excellent television coverage. Radio stations in the area were most cooperative and added much to the effectiveness of our program.

We of the Springfield City Council Fire Department Committee are especially honored to serve in promoting fire prevention and protection. Although we do not receive financial reward, if only one life has been saved by our efforts, we have been amply compensated.

Command Officers' Training Manual

AN INTERESTING 8½- by 11-in., 166-page mimeographed manual with the above title has just been published. Written in question and answer form, it covers seven subjects of interest to command officers of fire departments. Multiple choice type of questions have been used with the answer to the question explained. The manual covers the general topics of personnel management, administration and organization; the underwriters' grading schedule, statistics; arson and fire department laws; the theory of combustion; chemistry and chemicals; and flammable liquids and gases. The answers are supported by numerous references to NFPA publications and other authoritative sources.

According to the author, a student should not study this manual with the thought that these identical questions will reappear on some civil service examinations. The manual is designed merely to present facts and to stimulate the reader into research for background on the subjects covered.

Copies can be ordered from the Davis Coaching School, 100 Edgehill Way, San Francisco 27, California. Single copy price is $4.00 and quantity orders of five or more can be obtained at a 25 per cent discount or at $3.00 per manual.

Trainees using Rockwood Double Strength FOAM liquid learn one of the most effective fire-fighting techniques ever developed. Training cost is low because 3 gallons of FOAM provide 1,000 gallons of extinguisher.

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Rockwood Double Strength FOAM liquid gives you more efficient fire protection at lower cost than any other fire extinguishing agent. By mixing only 3 gallons of FOAM liquid with 97 gallons of water and 900 gallons of air you get 1,000 gallons of a powerful fire-fighting mixture — *the cost of which, per gallon, is only three tenths of 1% of the cost of FOAM.*

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For the best in performance, as well as appearance, *specify the FEDERAL Super Beacon Ray light and Class Q Coaster Siren on your new apparatus.* Write for Catalog #300.

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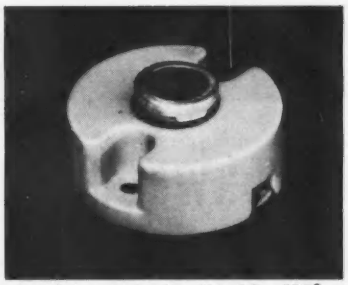

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False alarms should be avoided as much as possible. A fire detector operating on a fixed temperature should never give a false alarm.

The Life Saver Fire Detector will operate an alarm at 135 degrees. It is self-restoring and may be heat tested at any time. It is sold at a very reasonable price and should last indefinitely. It can be used with any Underwriters' approved panel.

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Membership Report

THIS year the annual meeting of the NFPA will be held in Montreal, Quebec, May 16–20, with headquarters at the Queen Elizabeth Hotel. We urge NFPA member fire departments in the vicinity to send one or more representatives to this important meeting. The coming issues of this magazine and NFPA *Fire News* will give more details on the week's program.

The following fire departments were enrolled as NFPA members recently:

Arizona: Sierra Vista Volunteer Fire Department, Sierra Vista.

California: Hermosa Beach Fire Department, Hermosa Beach; Madera Fire Department, Madera; Paradise Fire Department, Paradise; Yucca Valley Fire Department, Yucca Valley.

District of Columbia: District Heights Volunteer Fire Department, Washington.

Florida: Cedar Hammock Volunteer Fire Department, Bradenton.

Illinois: Westchester Fire Department, Westchester.

Indiana: Butler Volunteer Fire Department, Butler; Michigan City Fire Department, Michigan City.

Maryland: Arundel Volunteer Fire Department, Inc., Gambrills.

Massachusetts: Paxton Fire Department, Paxton.

Michigan: Melvindale Fire Department, Melvindale; Southgate Fire Department, Southgate.

Missouri: Ballwin Fire Protection District, Ballwin.

Nebraska: Nickerson Volunteer Fire Department, Nickerson.

New Brunswick: Nashwaaksis Fire Department, New Brunswick.

New York: North Massapequa Fire Department, North Massapequa; Port Jefferson Station-Terryville, Port Jefferson Station, L. I.

Oregon: Newport Fire Department, Newport.

Pennsylvania: Yardley Fire Company, Yardley.

Philippines: Manila Fire Department, Manila.

Virginia: Mechanicsville Volunteer Fire Department, Mechanicsville.

Washington: King County Fire District No. 26, Des Moines; Dickeyville-Paris Fire Department, Dickeyville; Village of River Hills Fire Department, Milwaukee; New Berlin Volunteer Fire Department, New Berlin; North Fond du Lac Fire Department, North Fond du Lac; Plover Volunteer Fire Department, Plover; Franklin Fire Department, Plymouth.

IMPORTANT FIRE SCHOOL DATES

Alabama: The 24th Annual State Fire College will be held April 11–15. For details contact W. L. Rickard, assistant state supervisor, Trade and Industrial Education, P.O. Box 2847, University.

Connecticut: The Sixth Annual Fire Officers' Conference is scheduled for April 5–7 at the University of Connecticut, where the Annual Fire Marshals' Conference will also be held April 19–21. Contact Roy W. Adams, director, Vocational Training Field Service, Connecticut State Department of Education, 490 Capitol Avenue, Hartford.

Florida: Resident training classes in forcible entry tools, breathing apparatus and extinguishers, fire inspection, and instructor training will be held March 14–18 at Florida State Fire College; in hose and ladders, company officer training, fire protection and prevention, March 21–25; in rescue, ventilation, salvage and overhaul, fire apparatus and pumps, and fire fighting tactics, March 28–April 1; in fire streams, arson detection and fire department administration, April 4–8. Write to Superintendent W. H. Barnett, Florida State College, P.O. Box 785, Ocala.

Indiana: The 16th International Arson Investigators' Seminar is scheduled for April 25–29, at Purdue University. For details write to Professor Shelby Gallien, Seminar Director, Public Safety Institute, Purdue University, West Lafayette.

Iowa: April 19–22 are the dates of the Iowa Fire Department Instructors' Conference in Ames. For information write to Keith Royer, supervisor, Firemanship Training, Iowa State University, 110 Marston Hall, Ames.

Kansas: A class in teacher training for fire department officers is scheduled for April 4–15 in Topeka. Contact Clyde A. Babb, director, Kansas Fire School, 111 Fraser, Lawrence.

Kentucky: The Fire Department Instructors' Conference will be held at the University of Kentucky, March 30–April 1. Write to John L. Thompson, chairman, Fire School Committee, 940 Starks Building, Louisville.

Louisiana: The Louisiana State Fire College will be held April 25–28 at Central Fire Station in Baton Rouge. Contact Frank E. Domma, superintendent, Box 96, Baton Rouge.

Michigan: An arson control seminar will be held March 9–11 and a state instructors' conference is scheduled for April 13–15. For details write to Francis Hartman, supervisor, Firemanship Training, Fire Training Center, University of Michigan, Ann Arbor.

Minnesota: The State Fire School will be held on the University of Minnesota Farm Campus in St. Paul, April 25–28. Write to Arthur Spottswood, coordinator and program chairman, 4254 Xerxes Avenue, North, Minneapolis.

Missouri: The Sixth Annual Convention of the Fire Fighters' Association of Missouri will be held April 23–24 in Kirksville. For information write to John L. Welsch, secretary-treasurer, 305 Forest, Harrisonville.

Ohio: Regional fire schools are scheduled for Vandalia, March 12–13, and Columbus (Clinton Township), May 7–8. Contact Byrl R. Shoemaker, supervisor, Trade and Industrial Education Service, 220 South Parsons Avenue, Columbus.

Oklahoma: The State Fire School is slated for April 25–29 at Oklahoma State University in Stillwater. Write to R. J. Douglas, head, Fire Protection Department, Oklahoma State University, Stillwater.

Ontario: The University of Toronto will be the site of the Fire Chiefs' Conference, April 27–29, and also the Ontario Fire Chiefs' Association annual convention April 28. Contact D. E. Barrett, director, Ontario Fire College, P.O. Box 830, Gravenhurst.

Oregon: An oil fire control school will be held at Judson Junior High School in Salem, March 17–19. Write Elmer H. Halstead, state supervisor, Public Service Training, Division of Vocational Education, Salem.

Pennsylvania: A fire department pump school is scheduled for April 25–29 at the Pennsylvania State Firemen's Training School in Lewistown. For details write to Art Espey, director, Box 631, Lewistown.

South Carolina: Regional fire schools are scheduled for Pacolet Mills Fire Department, March 14–18; Prosperity, April 11–15; Bamberg, April 18–22; and Beaufort, April 25–29. Contact Clarence A. Fischer, Sr., fire school coordinator, Orangeburg.

Tennessee: A special short unit course on pumps will be held April 20–22 at the Tennessee State Fire Training Center in Murfreesboro. For information, write Homer S. Elkins, instructor-coordinator, 215 Chestnut Street, Chattanooga.

Washington: A command school for administrative officers is slated for April 25–28 in Yakima. Contact Lyle Goodrich, supervisor of fire training, 3206 East 125th Street, Seattle.

KOHLER ELECTRIC PLANTS

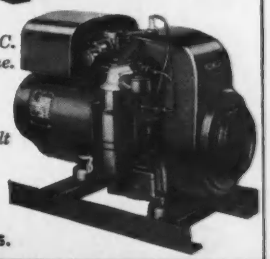
For emergency power *required by new OCDM ruling*

Install Kohler electric plants for reliable, automatic emergency power as specified by the new OCDM directive covering civil defense radio. Stand-by generators are required at base and repeater stations, and control positions, before equipment can be purchased with matching Federal funds.

Kohler stand-by plants with automatic transfer switch are fully packaged for immediate, unattended take-over of emergency loads.

Use portable, direct service Kohler models for floodlighting night fires, operating power tools and rescue equipment . . . Sizes to 100 KW, gasoline and diesel. Write for folder H-12.

MODEL 5RM21, *5 KW, 115 volt AC. Air-cooled, gasoline. Remote start.*



MODEL 2.5R21, *2500 watts, 115 volt AC. Air-cooled, gasoline. Remote start.*

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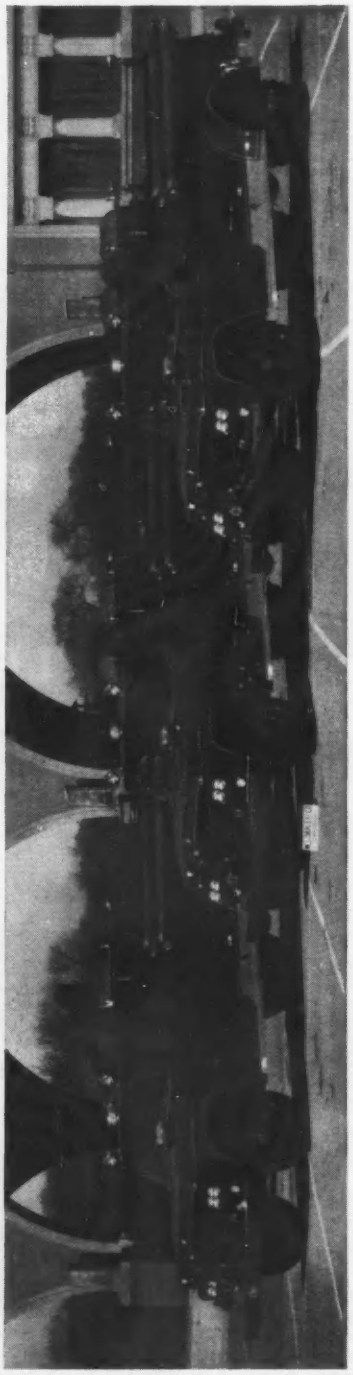
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Trinidad and Tobago Fire and Ambulance Service

(*Continued from page 13*)

complete fire engines have been constructed to the same standard as those purchased abroad.

The department has trained personnel who first and foremost are firemen, but in addition assist in making the department's furniture for fire stations, leather work for appliances, breathing apparatus, boot repairs for all personnel, uniforms and clothing for officers and repairs to firemen's uniforms. They also spray-paint all fire appliances once every two years.

Maintenance staff is shown installing an engine on a piece of fire apparatus in the workshop. The jack crane is used to remove engines.

Command

The fire service cannot function efficiently without proper command, and to this end careful arrangements are made for selection of Trinidad's officers who are usually chosen from the ranks.

In order to keep abreast of modern trends, training is being continually given to the officers. The Chief Fire Officer, by continuous contact with his subordinates, is able to maintain the keenness so desirable among the officers of a service where so much work is routine until some distraught voice calls "FIRE."

Capt. William Paul Babcock
1883 – 1960

CAPTAIN William Paul Babcock, well known in the volunteer fire service in New York State, died early in February. A member of the NFPA for 22 years, Capt. Babcock was a charter member of the Nyack Fire Patrol, the first salvage corps in a volunteer fire department. He was captain of the patrol when it affiliated with the Nyack Fire Department and the Rockland County Emergency and First Aid Council which later evolved into the New York State Volunteer and First Aid Association, Inc. He was an honorary member of the Highland Hose Company, Nyack; the Rockland County and the Hudson Valley Volunteer Firemen's Associations.

Filmstrips on Automotive Electricity

A NEW series of five sound filmstrips in color, "Automotive Electrical Fundamentals" may be useful to fire department master mechanics. It explains the why and how of electrical systems on automobiles and trucks. Electrical circuits and their component parts are shown in operation with appropriate commentary.

The five filmstrips are: Introducing Automotive Electricity, The Cranking Circuit, The Ignition Circuit, The Regulation and Charging Circuit, and The Lighting and Accessory Circuits. The complete series, with five 12-in. 33⅓ rpm recordings for manual or automatic projection, is priced at $49.50; individual filmstrips with records are $10.90. The new teaching series is available from the Jam Handy Organization, 2821 East Grand Boulevard, Detroit 11, and from authorized Jam Handy dealers.

Fire Loss Bulletin

A NEW Flammable Liquid Fire Loss Bulletin reports a $1,052,000 fire loss at an Oklahoma City, Oklahoma, oil and grease plant on August 24, 1959. This fire was investigated and the report prepared by Miles E. Woodworth, Flammable Liquids Engineer. Single copies of the bulletin are free to NFPA members upon request and additional copies may be purchased at 35 cents each with discounts for quantities.

FOR SALE

1949 MACK and 1950 SEAGRAVE PUMPERS

Sealed bids will be received until 2:00 p.m. June 5, 1960 for the sale of one 1949 Mack fire truck with Hale 500 gpm pump and 200 gallon booster tank and one 1950 Seagrave fire truck with 750 Seagrave pump and 150 gallon booster tank with standard equipment. List of equipment on each truck upon request. Both trucks are still in service and can be seen until bids are accepted.

Bids to be plainly marked "Bid on Fire Truck" and addressed to:

Tuxedo-Cheverly Vol. Fire Co., Inc.
5711 Tuxedo Rd., Tuxedo, Hyattsville P.O., Md.

We reserve the right to reject any or all bids.

CHIEF'S CAR FOR SALE

1958 Ford 2-door, 300 Series, equipped with Q2B siren (12 volts), Model 17 Beacon Ray light, radio and heater. Mileage, 23,180. Painted Pepsi Cola red with "Chief, Fire Department, Conway, Florida" on doors.

WRITE TO:

CONWAY VOL. FIREMEN'S ASSN.
3410 S. CONWAY RD., ORLANDO, FLORIDA

— FOR SALE —

Two Demonstrator Fire Tankers

1959 F600 FORD, 1500 Gallon. Fully equipped, including Hale PTO positive action pump. $5780 f.o.b. Jerseyville.

1959 350 GMC, 1500 Gallon. Fully equipped, including Hale PTO positive action pump. $5985 f.o.b. Jerseyville.

Write for terms and additional information.

BAUGHMAN MFG. COMPANY
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INCREASE YOUR INCOME!

Convert your spare time into steady income selling most popular line of Belts and Buckles with Fireman's personal initials, first name or nickname with miniature replicas of actual fire equipment beautifully enameled, also lapels, tie clasps, key chains, money clips, and cuff links. Excellent repeat business. We furnish you with FREE complete sales kit. Really nice part-time money producing items.

NO INVESTMENT NECESSARY!

For full particulars, write to

HOOK-FAST SPECIALTIES, INC.
Factory — 16 Eudora St.
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Home study correspondence courses from National Preparatory Institute have assisted fire fighters of all ranks in their promotional studies for 39 years. Courses cover engine and ladder company procedures, salvage, overhauling, inspections, fire problems, hydraulics and other subjects with sketches and illustrations of fire problems, tools and equipment.

FOR THE MAN AT THE TOP . . .
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General knowledge study of fire field subjects is keyed for rookies, plant protection forces and Armed Services fire forces. Your answers to problems are corrected and graded by qualified instructors.

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4 x 14 inches — 3-inch letters
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KEEP BACK 500 FEET

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A new basic manual of fire-fighting methods. An excellent guide for Fire Company Training Programs. Gives background for actions and decisions. Covers hose laying and apparatus positioning techniques.

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Let SPARKY help you sell fire safety to youngsters — and their folks!

Rugged 22-inch quality doll with removable white shirt, tie, blue denims, red hat, boots.

List of all SPARKY items on request

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...with a complete line of monitoring and communication receivers. Monitoradio has a receiver designed for your application.

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MCA-100 Alert Receivers. Crystal controlled single frequency for 25–50 or 147–174 MC FM bands. Designed to pass the most exacting requirements for commercial and civil defense use. Certified for civil defense use O.C.D.M. type #R-74+R-76. These two fine receivers offer features ordinarily to be found in much higher priced equipment. Complete units in durable metal cabinets with built-in squelch and self-contained speakers. Provisions incorporated for operating external switches to activate alerting devices for remote sirens.

All units are shipped complete with crystal installed to order and aligned to frequency. Ready for immediate use. When ordering, be sure to specify exact frequency.

MCA-100-L	25-50 MC	$124.95
MCA-100-H	147-174 MC	$124.95

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TO GET UTMOST EFFICIENCY FROM YOUR EMERGENCY COMMUNICATIONS EQUIPMENT—THE MONITORADIO GROUP ALERTING EQUIPMENT.

Models TC-1 & TC-2 Tone Switches. Now, for the first time, positive, dependable group alerting equipment is available at a remarkably low cost—from Monitoradio! Easily attached to Monitoradio receivers **with no wiring changes or cutting into the circuit,** model TC-1 and TC-2 tone switches keep the receiver "dead silent" until the transmission of the correct audio frequency tone from the base station. To this tone the tone switch responds, "unlocks" the speaker circuit of the receiver, and the message is heard. Monitoradio Group Alerting Equipment thus opens the way for greatly increased use of existing transmitting equipment by volunteer firemen or other groups who wish to hear only those messages specifically intended for them.

TG-3.. $79.50

Model TG-3 Tone Generator. Monitoradio Tone Generators are expressly designed for operation in conjunction with models TC-1 and TC-2 tone switches. Economical, easy to install at the base transmitter, they provide the stable, accurate tone source needed for optimum operation of the tone switches.

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Who Administers the Fire Department?

(*Continued from page 15*)

open to those who have served for two years as assistant chief and who have adequate fire department experience. Berkeley, California, requires five years' experience as a chief officer for those taking the examination for chief of the fire department. Wichita, Kansas, requires a minimum of ten and one half years in an administrative position and Seattle, Washington, requires ten years of fire department service in a city of 100,000 population or more.

In most cities the chief of the fire department is selected from three or more fire officers who pass the necessary examination and qualifications. The mayor or other appointing official, however, can select anyone of these officers for the top position.

In Milwaukee, the chief must have served for 15 years in the fire department; in St. Louis, Missouri, he must have had ten years' service as captain or as an officer of higher rank. Texas cities require those taking the examination as chief to have served at least five years in a paid fire department in that state.

A few cities have no particular qualifications of fire department service to limit applicants for the position of chief. Two cities reported that anyone could be appointed to the rank of chief of department. Of course, as a practical matter, municipal officials generally consider it best to choose someone with fire department service.

It should be universally appreciated that the fire department in a modern city is an essential service organization. The administration of that fire department within the appropriated funds and the supervision of the department's personnel and operations calls for intelligent leadership and an appreciation of the complex problems of municipal government. The intention of this article is simply to point out the various means by which different municipalities are attempting to solve this problem of administration. Obviously, fire department administration is worthy of further study by the fire service as well as by all others interested in efficient municipal operation.

The table on opposite page shows the individuals or groups who appoint fire chiefs in various cities. In most cases the chiefs take competitive examinations with other fire officers and one of the top candidates is selected as chief of department. The requirements for candidates taking such examinations are quite different in various cities as reported above. It should be noted, however, that in the smaller cities appointment of the fire chief is made by the city manager, mayor, or director of public safety, thus simplifying the administrative "chain of command."

Got Any Badges?

JOSEPH E. GUSTAFSON who is retired from the Portland, Oregon, Fire Department, for many years has been collecting fire department badges. He is interested in hearing from fire departments who may have old or new badges to give away so that he can add to his collection. Readers can contact him by writing to Joseph E. Gustafson, Area Chief, District No. 3, Portland Reserve Fire Fighters, 2533 N. W. Multnomah Street, Portland 12, Oregon.

Who Appoints Fire Chief?

Population	No. of Cities Surveyed	By Indiv. Fire Comm.	By Board of Fire Comm.	By Director of Public Safety	By City Manager	By Mayor	Other	Comments
Over 1 million	5	3	1				1*	*1 by Managing Director with Mayor's approval.
500,000 to 1 million	12		4	5		3	1*	*1 by City Council
250,000 to 500,000	21			7	7	4	3*	*1 by City Council 1 by Director of Personnel 1 by Manager of Safety and Excise
100,000 to 250,000	65	1	8	16	17	17	6*	*1 by Commissioner of Fire and Police 1 by Administrative Assistant with Mayor's approval 1 by Bureau of Police and Fire 1 by Bureau of Personnel 1 by Board of Fire and Police Commissioners 1 Elected by volunteer members, then appointed by Mayor with Council approval.

More for your Money...in MORYSVILLE

F-131 RESCUE UNIT

- 5,000 Watt Generator
- 110-Volt Throughout
- Six 110-Volt Outlets
- Eight Circuit Unit (Each Unit Has Own Switch)
- Four Spotlights • Six 12-Volt Flashers
- Full-Length Seats • Heavy Duty Const.
- Chrome Plated Railings
- Diamond Plate Decks
- Available in 84 to 121 CA (Shown 102 CA)
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Important Fire Service Meetings

Arizona:

APRIL 27–30: 34th Annual Convention of the Arizona State Firemen's Association, Hermosillo, Mexico. Contact Earl Hunt, secretary-treasurer, P.O. Box 442, Safford.

California:

MARCH 18: Marin County Association of Fire Departments, monthly meeting, Sausalito. Contact W. H. Lane, secretary, 74 Vandola Drive, San Rafael.

APRIL 15: Marin County Association of Fire Departments, monthly meeting, Hamilton Field. Contact W. H. Lane, secretary, at above address.

APRIL 21: Redwood Empire Firemen's Association, quarterly meeting, Napa. Contact W. H. Lane, secretary, at above address.

Delaware:

MARCH 22: Sussex County Volunteer Firemen's Association, monthly meeting. Contact W. J. Quillen, secretary, Millville.

APRIL 26: Sussex County Volunteer Firemen's Association, monthly meeting. Contact W. J. Quillen, secretary, Millville.

Kansas:

APRIL 11–13: Kansas Inspectors' Association, Kansas State University, Manhattan. Contact L. L. Brinkley, secretary, 104 South Main Street, Wichita.

APRIL 27–30: Second Regional Fire School, Kansas State Firemen's Association, Penn Hotel, Pittsburgh. Contact E. E. Mehl, secretary, 544 South Hillside Street, Wichita.

Minnesota:

APRIL 27: Northern Region Firemen's Association, Spring meeting, Halstead, six p.m. Contact Roy Langevin, secretary, Thief River Falls.

Nebraska:

APRIL 21: Thayer County Volunteer Firemen's Association, quarterly meeting, Alexandria. Contact B. J. Cabrera, secretary, Box 446, Deshler.

New Jersey:

MARCH 17: Gloucester County Firemen's Association, regular meeting (Old Timers' Night), Harmony, Mullica Hill. Contact Walter H. Mattson, secretary, 29 Home Avenue, Gibbstown.

APRIL 21: Gloucester County Firemen's Association, monthly meeting, Good Will at Woodbury. Contact W. H. Mattson, secretary, at above address.

New York:

MARCH 15: Ulster County Volunteer Firemen's Association, monthly meeting, Marlboro. Contact Fred C. Harder, secretary, 34 Jarrold Street, Kingston.

MARCH 17: Hudson-Mohawk Volunteer Firemen's Association, monthly meeting. Contact W. J. Hopmeier, secretary, RD 5, Box 267, Schenectady.

MARCH 29: Orange County Volunteer Firemen's Association, regular meeting, Fort Montgomery. Contact Kenneth Fowler, secretary, Harriman.

APRIL 3: Western New York Volunteer Firemen's Association, executive meeting, Hilton Fire House, three p.m. Contact H. A. Craig, secretary, P.O. Box 1, Alexander.

APRIL 8: Rockland County Volunteer Firemen's Association, monthly meeting, Tallman Fire Department, Tallman. Contact M. R. Blauvelt, 140 Fifth Avenue, Nyack.

APRIL 12: Sullivan County Volunteer Firemen's Association, quarterly meeting, Mountaindale. Contact William Harris, secretary, Pond Eddy.

APRIL 19: Dutchess County Volunteer Firemen's Association, quarterly meeting, New Hamburg. Contact Albert Belle Isle, secretary, Box 725, Glenham.

APRIL 19: Ulster County Volunteer Firemen's Association, monthly meeting, Scorsby Fire House, Ellenville. Contact F. C. Harder, secretary, at above address.

APRIL 20: Columbia County Volunteer Firemen's Association, quarterly meeting, Stockport. Contact Edward L. Rowe, secretary, Box 118, Mellenville.

APRIL 24: Monroe County Volunteer Firemen's Association, Inc., annual meeting, Barnard Exempts' Club. Contact Nathan C. Morrell, secretary, 241 Buckman Road, Rochester.

APRIL 26: Suffolk County Volunteer Firemen's Association, quarterly meeting, Suffolk County Fire Training Center, Yaphank. Contact George Hechler, president, 9 Bayview Avenue, East Islip.

North Carolina:

APRIL 12: Eastern Carolina Firemen's Association, quarterly meeting, Kinston. Contact Mark C. Lasitter, Jr., secretary, Snow Hill.

Ohio:

APRIL 5: Logan County Firemen's Association, monthly meeting, Degraff. Contact J. D. Schmelzer, secretary, Rushsylvania.

APRIL 6: Greene County Firefighters' Association, monthly meeting, Spring Valley. Contact W. H. Shoemaker, secretary, 523 Glover Drive, Xenia.

APRIL 27: Central Western Firemen's Association, bi-monthly meeting, New Lebanon Fire Department, New Lebanon.

Pennsylvania:

MARCH 16: Beaver County Firemen's Relief Association, monthly meeting, White Township. Contact Warren E. Miller, secretary, 339 Pennsylvania Avenue, Rochester.

MARCH 19: Western Pennsylvania Firemen's Association, monthly meeting, South Butler Township, Butler. Contact Edward Clawson, secretary, 785 Fourth Avenue, New Kensington.

MARCH 28: Lehigh County Volunteer Firemen's Association, monthly meeting, Macungie Fire Company, Macungie. Contact Arthur Mohr, secretary, Vera Cruz.

APRIL 4: Adams County Volunteer Firemen's Association, quarterly meeting, Conewago Fire Hall. Contact Donald Smeerginger, secretary, R. D. 4, Hanover.

APRIL 16: Western Pennsylvania Firemen's Association, monthly meeting, Aliquippa. Contact Edward Clawson, secretary, at above address.

APRIL 19: Perry County Firemen's Association, quarterly meeting, Duncannon. Contact F. L. Frey, secretary, New Bloomfield.

APRIL 20: Beaver County Firemen's Relief Association, monthly meeting, Big Knob Fire Station. Contact W. E. Miller, secretary, at above address.

APRIL 25: Lehigh County Firemen's Association, monthly meeting, Goodwill Fire Company No. 2, Germansville. Contact Arthur Mohr, secretary, Vera Cruz.

Rhode Island:

MARCH 30: Pawtuxet Valley Firemen's League, regular meeting, Volunteer Fire Company, Hill Farm Road. Contact Everett F. Fiske, secretary, 34 Pleasant Street, West Warwick.

APRIL 27: Pawtuxet Valley Firemen's League, monthly meeting, Meshanticut Park Fire Company. Contact E. F. Fiske, secretary, at above address.

Wisconsin:

APRIL 28 AND 29: 1960 Wisconsin Fire Inspectors' Institute, Wausau. Contact Chief W. G. Petzold, Wausau.

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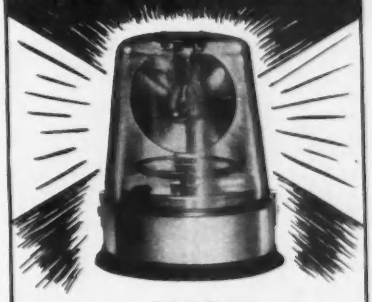

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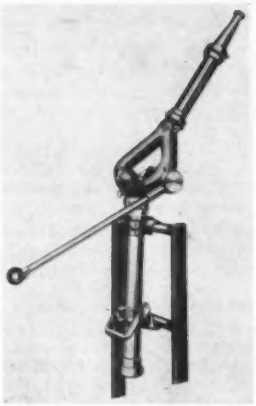
this month's News and New Products



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Rounding out its master stream appliances, *Elkhart Brass Manufacturing Company, Inc.*, has designed, and now has ready for delivery, its new No. 288 Ladder Pipe which can handle the full capacity of a three-inch supply line. With double stream shapers and directional baffle, the water way is designed to give the absolute minimum amount of friction loss.

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George Duncan Fire & Safety Corporation, 105 South Lincoln Street, Wilmington, Delaware, is a new distributor for Pacific Mercury electric plants. . . . Fire departments and industrial plants will find the new 20-page catalog display of the 1960 line of Ansul fire equipment a handy reference guide. Write to Catalog Department, *Ansul Chemical Company*, Marinette, Wisconsin.

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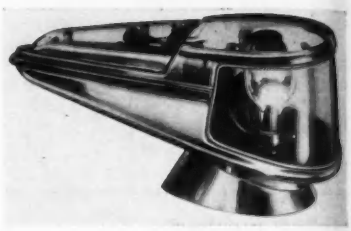

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